REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-23 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

APPEAL

Applicants note with appreciation that the Examiner has removed the previous Final Rejection. The Examiner indicates that the previous rejection has been withdrawn and the rejections are based on the newly cited reference. However, Applicants note that the only newly cited reference is the Japanese patent Takashi which was applied to claims 17-23. And even in the rejection of these claims it is only used as a secondary reference. The Examiner has re-used the exact same references cited in the Final Rejection, but applied them in different combinations.

Applicants submit that if the Examiner is going to remove the previous rejections, that all of the claims that were not rejected over the new art should have been allowed. These references have been available to the Examiner previously and four actions were issued before the Appeal. Applicants request that the Examiner either allow the claims or proceed to Appeal so that a final determination can be made in regard to these references.

Rejection Under 35 U.S.C. § 102

Claims 1, 7, 8, 14 and 15 stand rejected under 35 U.S.C. § 102 as being anticipated by Horiuchi et al. (US Patent 5,969,445). This rejection is respectfully traversed.

First, it is pointed out that independent claims 1 and 8 have now been amended to describe the slot as receiving and positioning the motor controller. Applicants submit that the references do not show this feature.

The Examiner has stated that Horiuchi shows a container 56 for mounting a motor controller having a chassis 46 and a slot between 58 and 56B to receive FETs 55. Applicants submit that Horiuchi et al. does not show the invention as presented

in claims 1 and 8. First, Applicants submit that the heat sync 56 is not a container. Further, Applicants submit that the opening in which the FETs are placed is not a slot as suggested by the Examiner. This area is defined by a contact portion 56B and a plate spring 58. First, Applicants submit that this does not constitute a slot in a main body of a container, but merely an opening onto which the FETs are placed.

Furthermore, claims 1 and 8 now make it clear that the slot positions the motor controller. This is not the case in Horiuchi where the FET 55 is positioned by spring plate 58 rather than by the slot. Thus, the FET is inserted into this position and pushed to abut the contact portion 56B by the spring plate 58. This differs from the present invention where the slot receives and positions the motor controller. This is seen, for example, in Figure 2 of the present application where the slot 221 is formed in the container 22 which receives and positions the motor controller 23.

Furthermore, the FET 55 taught by Horiuchi is used as a switch while the other circuits which control the motor are formed on control board 19 that are not received in this slot. Thus, Applicants submit that both claims 1 and 8 further define over the reference since it does not show the motor controller received and positioned in the slot but rather a switch element and also because this element does not drive and control the heat-dissipating device as described in claim 8.

Paragraphs 7, 14 and 15 depend from claims 1 and 8 and as such are also considered to be allowable. In addition, in regard to claim 15, it is noted that the claim describes that the motor controller has a plurality of pins with broadened contacts to which a plurality of wires of an external device are connected. The Examiner has referred to pin 61 to meet this limitation. However, claim 61 is only a grounding pin and accordingly would not have a plurality of such elements. Further, this pin does not have a broadened contact to which a plurality of wires are connected. Instead, the pin acts as a ground connecting the heat sync to circuit board 19. Accordingly, Applicants submit that claim 15 is additionally allowable.

Rejection Under 35 U.S.C. § 103

Claims 2-6 and 9-13 stand rejected under 35 U.S.C. § 103 as being obvious over Horiuchi et al. in view of Doemen et al. (US Patent 4,482,829). This rejection is respectfully traversed.

The Examiner relies on Doemen et al. to show the use of hooks to secure the container to the chassis. The Examiner specifically refers to elements 179 and 180 in Figure 9. These elements are only described at column 7, line 14 and are called "centering bolts." It appears that these bolts are connected to holder 173 and extend through circuit board 172 to locate the holder. However, there is no statement of hooks being attached to these bolts. It is noted that Figure 9 shows a semi-circle extending below bolt 179 and above bolt 180. However, these appear to be from an element which is behind the bolts in this figure since Figure 8 shows the bolts without any such protrusion. Accordingly, Applicants submit that Horiuchi does not show the use of hooks.

The Examiner also states that Doemen shows pillars 56. These elements are described at column 3, line 2 as being enlargements of the circular base plate 55. Thus, these appear to be pegs which allow the bolt to be positioned on circuit board 28. Applicants submit that these pegs do not constitute pillars which form a container to receive the motor controller. The claimed pillars are shown in Figure 3 as elements 321 where the pillars contain a slot for receiving the motor controller device. The pegs 56 shown in Doemen et al. appear to only act as devices for positioning the mold 54. Thus, Applicants submit that Doemen et al. does not show this feature either. Further, the pillars do not have U-shaped cross sections.

The Examiner also states that Doemen shows that the container is substantially square and that the slot is formed in the central portion. It is assumed that the Examiner is referring to the container as the mold 54, although the rejection does not state this. It is also assumed that the Examiner is referring to the slot as the part of the mold which holds sensor 30. Applicants submit that even if Doemen et al. does show a container which is square and has a central slot, it does not teach that this container is used to hold a motor controller, and instead holds a sensor. Accordingly, Applicants submit that the Examiner has misapplied the Doemen et al.

reference and that this rejection is also overcome. Further, these claims remain allowable based on their dependency from allowable claims 1 and 8, since Doemen et al. also does not show a slot which receives and positions a motor controller in a container.

Claim 16 stands rejected under 35 U.S.C. § 103 as being obvious over Horiuchi et al. in view of Doemen et al. and further in view of Horng (US Patent 6,462,443). This rejection is respectfully traversed.

The Examiner relies on Horng to show that the motor controller is an integrated circuit. Applicants submit that even if this reference shows this feature, this claim remains allowable based on its dependency from allowable claim 9 from which this claim depends. Accordingly, this rejection is also overcome.

Claims 17, 22 and 23 stand rejected under 35 U.S.C. §103 as being obvious over Horng in view of Takashi (JP 63-039448). This rejection is respectfully traversed.

The Examiner states that Horng shows a chassis 4, a stator 11, 12, a rotor 5, and a motor controller 3 which is mounted on and protrudes from the stator. The Examiner admits that Horng does not show a container directly mounted on and protruding from the stator and having a slot to receive the motor controller.

The Examiner relies on Takashi to show a container 16 directly mounted on and protruding from the stator 10 and having a slot to receive the sensor.

Applicants submit that Horng teaches that the stator bobbin 11 includes a recess 15 to at least partially receive the drive means 3. Thus, this motor has a minimum thickness after assembly as described at column 2, lines 50-53. Thus, Horng is designed to avoid any container which would add to the thickness of the drive means. Takashi, however, includes a container 16 which projects outwardly from the plane of the stator for receiving the sensor 21. This conflicts with the design of Horng which is to remove any thickness which would make the motor larger in the thickness direction. Also, Takashi teaches that the sensing element 21 is mounted on the printed substrate 20, which is similar to the arrangement shown in prior art Figure 1B of the present application. This differs from the present invention where the motor controller is mounted in a container which is directly mounted on the stator. Accordingly, Applicants submit that claim 17 is not obvious over either of these

references or their combination. Furthermore, Applicants submit that it would not be obvious to combine these two teachings since their goals conflict.

Claims 22 and 23 depend from claim 17 and as such are also considered to be allowable. In addition, claim 22 describes that the motor controller has a plurality of pins with broadened contacts to which a plurality of wires and external device are connected. Applicants submit that the references do not show such broadened contacts nor the connection of the wires of an external device. Accordingly, these claims are additionally allowable.

Claims 18-21 stand rejected under 35 U.S.C. § 103 as being obvious over Horng in view of Takashi and further in view of Doemen et al. This rejection is respectfully traversed.

The Examiner cites the Doemen reference to show a cover with a container, the container being formed with pillars. As pointed out above, Applicants submit that Doemen et al. does not show pillars nor a container as suggested by the Examiner. Accordingly, Applicants submit that these claims are likewise allowable.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

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Respectfully submitted,

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